CONTENTS

Special Issue: Molecular Behaviour in Dipolar Liquids — A Collection of Invited Papers in Honour of Professor Gerhard Klages

Preface ix
Dielectric spectroscopy and molecular dynamics of methylene chloride CH_2Cl_2
J.K. Vij (Dublin, Ireland), F. Hufnagel (Mainz, Germany) and T. Grochulski (Warsaw, Poland) 1
Frequency dependent electric polarisation due to optical rectification: effect on far infra red bandshapes
M.W. Evans (Ithaca, NY, USA) and G. Wagnière (Zurich, Switzerland) 17
The electric field equivalent of the Faraday effect: a computer simulation
M.W. Evans (Ithaca, NY, USA) 29
About the role of oscillators in the calculation of the frequency-dependent permittivity of polar liquids
G. Debiais and J.-L. Déjardin (Perpignan, France) 37
Full band spectroscopic studies on the molecular mobility of diluted alcohols
F.F. Hana, I.K. Hakim and A.L.C. Saad (Cairo, Egypt), F. Hufnagel and F. Drexler (Mainz, Germany) 49
Proton-tunnelling and dielectric relaxation spectroscopy
J. Gilchrist (Grenoble, France) 67
The Langevin equation for the dipole vector of symmetric top molecules
W.T. Coffey and Y.P. Kalmykov (Dublin, Ireland) 79
A model of the molecular reorientation with the modified white noise for the friction torque — an application to the dielectric relaxation
K. Pasterny (Katowice, Poland) 87
Dielectric investigations of pure and mixed fluorocarbons in their condensed phases
R. Böhmer (Tempe, AZ, USA) and A. Loidl (Mainz, Germany) 95
Dielectric relaxation of some binary liquid mixtures containing polyethyleneglycol as one component
E. Wessling, M. Stockhausen and G. Schütz (Munster, Germany) 105
On the physical mechanism giving rise to Debye behaviour in dielectric media
J.H. Calderwood (Salford, UK) 119
Relaxation dynamics at the glass transition in orientational and canonical glasses investigated by dielectric spectroscopy
A. Loidl, S.L. Hutton, I. Fehst and R. Böhmer (Mainz, Germany) 133
Far-infrared studies of the molecular dynamics and interactions in *N*-methyl formide
R. Buchner (Regensburg, Germany) and J. Yarwood (Durham, UK) 141
Pressure as an aid to the study of order in liquids
W.G.S. Scaife (Dublin, Ireland) 155
On the effect of finite crossing time on the frequency-dependent polarizability of a dipole with two, anti-parallel equilibrium positions separated by a high energy barrier
B.K.B. Scaife (Dublin, Ireland) 163
Dependence of the relaxation time of the magnetization of a ferromagnetic particle on the anisotropy of the particle
P.J. Cregg and K.P. Quinn (Dublin, Ireland), D.S.F. Crothers and C. Scully (Belfast, Ireland) 169
On the Brownian movement of a particle in a tilted cosine potential and its application to the calculation of the current voltage characteristics of Josephson junctions: use of continued fraction methods
K. Quinn (Dublin, Ireland) 187
Dielectric relaxation in solutions of polar liquids
Y.P. Kalmykov (Moscow, U.S.S.R.) 201
Volumetric properties of aqueous alkali halides and ionic hydration
G. Onori, A. Santucci and F. Marchesoni (Perugia, Italy) 209
Dielectric and ultrasonic spectroscopy of liquids. Comparative view for binary aqueous solutions
U. Kaatze and R. Pottel (Göttingen, Germany) 225